

approximately 10 per cent of his tested individuals gave no peripheral inflammatory reaction whatsoever, agreeing quite closely with the 10 per cent alcohol-tolerant group of the Dresden psychologists.

Doctor Nagle supported his conclusion that the proposed skin test is a reliable measure of individual tolerance or susceptibility to ingested alcohol by the histories of one hundred committed alcoholics tested during the past eighteen months in Agnews State Hospital. Habitual alcohol consumption by these individuals before court commitment was, in all cases, inversely proportional to skin tolerance. In many alcohol allergics habitual consumption was less than that of the average non-alcoholic social drinker. In one extreme case, for example, alcohol was not suspected as an etiological factor in the commitment "psychosis," till his skin test revealed a four plus hypersusceptibility. In this case the commitment diagnosis was changed to "alcoholic allergy without psychosis." A very interesting confirmation of Doctor Nagle's conclusion was obtained by susceptibility tests on eleven non-alcoholic volunteers. The minimum number of highballs taken on an empty stomach necessary to cause detectable intoxication (speech defects) was determined for each of these individuals. From data thus obtained, Doctor Nagle predicted the severity of the subsequent skin reaction correctly in ten cases.

In the discussion of Doctor Nagle's paper before the Allergic Association, it was pointed out that ten years ago his conclusion would have been accepted without question. At that time the skin reaction was quite generally considered to be both qualitatively and quantitatively diagnostic of the allergic sensitivity of all other tissues and organs of the human body. During the last decade, however, it has been definitely shown that marked cutaneous sensitivity may be, and often is, associated with a nonreacting bronchial musculature, and that high pulmonary sensitivity is occasionally associated with nonallergic skin. At the present time, therefore, most allergists will be skeptical of Doctor Nagle's claims till the reliability of his test is confirmed by more adequate and detailed experimental or clinical evidence. If confirmed, however, Doctor Nagle has made an epoch-making contribution to medico-legal and clinical technique.

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### CONTRAINDICATIONS OF MANIPULATION IN ORTHOPEDICS

Manipulation should be used judiciously, for its use in many cases may be definitely harmful. Particularly is this so when there has been a failure of diagnosis of the condition to be treated, or where the diagnosis has been incorrect. The condition called lumbago, for example (which implies simply the existence of back pain), consists, in fact, of a failure of diagnosis. Probably 90 per cent of the cases of so-called sciatica constitute incorrect diagnoses, the reason being that any pain radiating

down the back of the leg is frequently labeled sciatica.

The reasons for this should be clear, but to elucidate: A patient with a diagnosis of lumbago is sent in for treatment. All this means is that the patient has a pain in his back, and that, too frequently, is all the doctor knows about it. Obviously, a pain in the back, or lumbago, may be due to any number of pathologic conditions, such as acute and chronic infectious spondylitis, syphilis, osteochondritis, tuberculosis, spondylolisthesis, or forward slipping of one vertebra on another, the only symptom of which may be back pain. It is probably superfluous to mention fractures of the spine as a contraindication to manipulation, yet certain fractures of transverse processes are frequently missed and, therefore, may be called lumbago.

Many other conditions may be mentioned, but attention will be called only to acute and chronic osteomyelitis, bone tumors, whether primary or metastatic, and finally low-back strain, by which is meant lumbosacral or sacro-iliac strain. This last-mentioned condition is probably that most frequently called lumbago. The reason why manipulation is contraindicated in this condition should be clear when one visualizes what, in fact, is meant by strain. In sacro-iliac strain, for example, the underlying pathology is a rupture or tearing of the sacro-iliac ligaments, or those ligaments which bridge the joint between the ileum and the sacrum, and which constitute its principal support. Coincidental with such rupture or tearing, there is bleeding or hemorrhage from the ends of the torn ligaments and, eventually, organization of the blood-clot and repair by means of infiltration of new connective tissue.

Now, if at any phase of this process a back so affected is manipulated, the reparative process is interrupted, thereby prolonging recovery and adding to the patient's pain. The contraindication to manipulation in the other conditions mentioned is more easily apparent; as, for instance, the dissemination of malignant cells in bone-tumor cases, facilitating metastases, or the production of pathologic fractures, by weakening a spine already structurally weak from disease. In spondylolisthesis, manipulation may increase the deformity, may cause, as in fractures of the spine, pressure on nerve roots or on the cord, as the case may be, resulting in paralyses of varying extents.

As mentioned before, sciatica is frequently an incorrect diagnosis. Sciatica is a synonym for sciatic neuritis, or inflammation of the sciatic nerve. When present, there is, in fact, pain down the back of the leg, but, in addition, there are sensory disturbances and loss of reflexes. The signs are scattered, or they may be referable to involvement of the entire nerve. Incidentally, the condition is relatively rare. On the other hand, pain down the back of the leg is relatively common, and is frequently due to pressure on the nerve roots of one of the nerves which forms the sciatic, by changes in the vertebral articulations at the point of emergence of the nerve. In either instance, manipulation is contraindicated, but particularly so in true sciatic neuritis, where rest, heat, and removal of focal in-

fection should be carried out. It is, of course, almost as absurd to manipulate a leg because of pain down the back of it, when the pain is due to pressure on one of the nerve roots above. It is not only futile as a therapeutic procedure, but it also helps to mask the true cause of the pain and delays investigation leading to proper diagnosis and appropriate treatment. For these reasons, the procedure known as "stretching the sciatic," in the author's opinion, should be completely dropped as a therapeutic modality. In addition to an almost universal contraindication, it is extremely doubtful if the sciatic nerve is stretched by the procedure, and if it is stretched, whether it makes any difference.

Manipulation is also contraindicated in many definitely diagnosed conditions, such as fractures which are not completely healed, acute subacromial bursitis, cases of which undoubtedly have been labeled neuritis of the shoulder, acute and chronic arthritis, and others. In instances of fibrous ankylosis of joints, whether the result of a cured arthritis, or of prolonged immobilization during the healing of a fracture, this modality may be used, but only with extreme caution, lest a fracture result. Hence, it seems wise to use the modality of manipulation only occasionally, rather than almost constantly, as is done by the chiropractors and osteopaths.

In conclusion, the most outstanding contraindication for manipulation is failure of diagnosis, or incorrect diagnosis. When the condition under treatment is known to be a fibrous ankylosis, and almost only then, manipulation may be used with safety and with benefit.

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*Explains Means of Preventing the Reactions From Vein Feedings.*—Means of preventing the fever and chills which may follow intravenous or vein feedings are explained by Charles M. Nelson, M.D., Richmond, Virginia, in *The Journal of the American Medical Association* for April 8.

Although these reactions have been commonly attributed to various causes, Doctor Nelson says that experiments show the real factor is bacterial contamination of the distilled water used in the solutions for these feedings.

Boiling the water to be used for six hours will destroy the fever-producing agent. Autoclaving (sterilization under steam pressure) for three or four hours will also destroy it. The usual sterilization period tends to enhance its growth.

Even when sterilized by the usual method, the tubing and flasks used in giving intravenous feedings may sometimes cause fevers, as the fever-producing factor may have lodged in them previously while a solution (not autoclaved) was passing through the apparatus.

Doctor Nelson points out that "any organism that is capable of elaborating a fever-producing substance, which thrives at room temperature and which is a common contaminant, may be the offender. No organism will ever be the offender if the distilled water is taken directly from the still—most storage tanks are contaminated by backflow of air when the still cools—and autoclaved immediately."

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People who are always taking care of their health are like misers, who are hoarding up a treasure which they have never spirit enough to enjoy.—Sterne.

## ORIGINAL ARTICLES

### MEDICAL TRENDS\*

#### ADDRESS OF THE PRESIDENT

By WILLIAM W. ROBLEE, M.D.  
*Riverside*

ANOTHER year in the history of the California Medical Association has come and gone. The by-laws provide that, at the annual meeting, the President shall deliver an address which shall summarize for its members the events of the past year and the problems unsolved or in prospect. Your President presents his report in fulfillment of that mandate.

This has been a very busy and eventful year in organized medicine. Administrative, political, economic, and scientific problems have engaged the attention of your officers, committeemen, the House of Delegates and membership to a larger degree than heretofore.

#### INCREASING COMPLEXITY OF MEDICAL PROBLEMS

Each year the problems become more complex. The reasons therefor extend far out into the fabric of civilization. Medicine is but one part of this social picture; and much as some of us may wish for a continuation of the *status quo*, such a policy is impossible. The science and art of medicine are not static, its social and economic features are also subject to evolutionary change. Our thought and action must conform to them or we shall go the way of the dinosaur, and the saber-tooth tiger. They were physically powerful, but lack of adaptability to changed conditions eliminated them.

#### HISTORICAL BACKGROUND

A brief historical résumé of some of the elements of American life that have brought about present-day conditions and problems may profit us.

The American continent was settled by a sturdy, independent group of citizens. They were adventurous spirits who desired freedom from oppression and an opportunity to develop along independent lines. There was room for all on a continent rich in natural resources. Pioneer conditions were not easy and the fit who survived became, because of inheritance and the struggle for existence, a hardy race of independent thinkers, in which the family was the social unit and the family cared for its own. In comparison with our cities theirs were very small towns, life was largely rural, social contacts were confined to small villages and neighborhood gatherings. Life was simple, needs were few and largely provided by the products of the farm.

#### AUTHOR'S RECOLLECTIONS

My memory goes back to grandfather's pioneer farm in northern Wisconsin and of seeing him cut wheat with a scythe, thresh it with a flail and

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\* Address of the President. Given at the first general meeting of the sixty-eighth annual session of the California Medical Association, May 1-4, 1939, Del Monte.